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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, QUANG N

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/03/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/532,404

Applicant(s)

HEBEL ET AL.

Examiner

Quang N. Nguyen

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10 and 16-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10 and 16-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Detail Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/14/2004 has been entered.

Claims 7-10 and 16-36 are presented for examination. Claim 7 has been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-10 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 5,699,523), herein after referred as Li, in view of Hluchyj et al. (US 5,231,633), herein after referred as Hluchyj.

4. As to claim 7, Li teaches a method for communication between at least one client and at least one server in a computer network, comprising the steps of:

sending a message having a priority level (a seventh field **priority** of four eight-bit bytes, to indicate the degree of priority) from the client to the server (Li, C4: L4-34);

receiving the message at the server (through the router 360 of Figs. 2-3);

However, Li does not explicitly teach the steps of reading the priority level of the message, determining a current client rotation position of the client at the server, and inserting the message into the message queue by the server in response to the priority level and the current client rotation position of the client.

In the related art, Hluchyj teaches a queueing and dequeuing mechanism for use in an integrated fast packet network, wherein fast packets from different traffic types are multiplexed with one another through use of a weighted round-robin bandwidth allocation mechanism, comprising the steps of:

reading the priority level (i.e., reading 2 bits in the header of each fast packet that indicates a discard priority) of the message at the server;

determining at the server a current client rotation position of the client (the data/voice packets are classified into discard priorities and put into priority queues then performed on a rotating or "round robin" fashion by the round robin packet selector to obtain an equal chance of access and avoid starvation); and

inserting the message into the message queue (enqueueing fast packets using header information to the appropriate queue) for processing by the server in response

to the priority level and the current client rotation position of the client (Hluchyj, C4: L41-61, C5: L43-68, C6: L1-56 and C7: L17-59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify and combine the teachings of Li and Hluchyj to include the steps of reading the priority level of the message, determining a current client rotation position of the client at the server, and inserting the message into the message queue by the server in response to the priority level and the current client rotation position of the client because it would avoid starvation and allow messages to be handled from highest to lowest priority by the prioritization of messages (fast packets) of different traffic types, round robin fashion selectively discarding of certain messages, and bandwidth allocation through multiplexing.

5. As to claim 8, Li-Hluchyj teaches the method of claim 7, further comprising the steps of sequentially processing a plurality of messages from the message queue by the server (Li, C5: L29-49; Hluchyj, C6: L57-68 and C7: L1-16).

6. As to claim 9, Li-Hluchyj teaches the method of claim 8, further comprising the steps of storing incoming messages for insertion into the message queue (Hluchyj, storing various incoming fast packets into multiple queues 507-509, 506, 511-513 of Figs. 5-6) during the sequential processing of messages by the server (Hluchyj, C5: L43-63).

7. As to claim 10, Li-Hluchyj teaches the method of claim 7, further comprising the steps of: determining address information (Li, a tenth field formed of four eight-bit bytes identifying the addressee of the message) for the server by the client; and creating at the client the message including the address information for the server (Li, C4: L4-34).

8. Claims 16-18 are corresponding network system claims of claims 7-9; therefore, they are rejected under the same rationale.

9. Claim 19-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li, in view of Hluchyj, and further in view of Gyllstrom et al. (US 5,179,708), herein after referred as Gyllstrom.

10. As to claim 19, Li-Hluchyj teaches a network system of claim 16 but does not explicitly teach the server to store and process the first message before the second message if the first message's priority level is higher than the second one's or if the first and second have the same priority level and the first client's rotation position is before the second client's rotation position.

In the related art, Gyllstrom teaches a system for message delivery wherein the message is immediately delivered to destination or stored in one of a plurality of message queues based on its priority level (Gyllstrom, Figs. 4-5 and corresponding text, C4: L21-68 and C5: L1-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify and combine the teachings of Li-Hluchyj and Gyllstrom to store and process messages based on their priority levels and rotation positions because it would guarantee that messages are delivered at the same priority as they were sent and hence do not cause preemption of higher-priority processes (Gyllstrom, C1: L65 - C2: L1).

11. As to claims 20-23, Li-Hluchyj-Gyllstrom teaches the network system of claim 16, wherein the server is further operable to store the messages in a queue according to the messages' priority levels and the clients' rotation positions and to process the messages in order of storage in the queue (Gyllstrom, C3: L67-68, C4 and C5: L1-27).

12. Claims 24-31 are corresponding server claims of claims 16-23; therefore, they are rejected under the same rationale.

13. Claims 32-36 are corresponding method claims of claims 16-23; therefore they are rejected under the same rationale.

Response to Arguments

14. In the remarks, applicant argued in substance that

(A) Prior Arts do not teach, suggest, or disclose, "inserting the message into a message queue for processing by the server".

As to point (A), before addressing the argument, it is noted that the language of the limitation cited in the quotation can be given broad and reasonable interpreted in light of specification as the packets (messages) are queued (inserted) for transmitting (processing) by the server (i.e., by a proxy server, a router, or an internodal trunk).

Hluchyj teaches a method for prioritizing, selectively discarding, and multiplexing network data/voice packets using a queueing and dequeuing mechanism wherein the data/voice packets are classified into discard priorities (determined/read the priority), put (inserted) into priority queues, then multiplexed and transmitted (processed). Therefore, **Hluchyj** does teach, "inserting the message into a message queue for processing by the server".

(B) Prior Arts do not teach, suggest, or disclose, "determining at the server a current client rotation position of the client".

As to point (B), **Hluchyj** teaches the data/voice packets (client messages) are classified (determined) into discard priorities, put (inserted) into priority queues then performed on a conventionally rotating or "round robin" fashion (i.e., determining a

current client rotation position) by the round robin packet selector to obtain an equal chance of access and to avoid starvation. Therefore, **Hluchyj** does teach, "determining at the server a current client rotation position of the client".

(C) Applicants further assert that nowhere does **Hluchyj** appear to discuss referencing the sending node, source, or client to determine placement in the weighted round robin (WRR). Indeed, the source of the packets in **Hluchyj** appears to be irrelevant – each embodiment appears to queue packets in the WRR based on the traffic type.

As to point (C), in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Examiner recognizes the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

15. Applicant's arguments as well as request for reconsideration filed on 01/14/2004 have been fully considered but they are not deemed to be persuasive.


16. A shortened statutory period for reply to this action is set to expire THREE (3) months from the mailing date of this communication. See 37 CFR 1.134.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (703) 305-8190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (703) 305-4003. The fax phone number for the organization is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Quang N. Nguyen



RUPAL DHARIA
SUPERVISORY PATENT EXAMINER